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The CHEMIST

NOVEMBER, 1936 VOLUME XIII, NO. 8

AMERICAN INSTITUTE OF CHEMISTS

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OPPORTUNITIES FOR SERVICE BY THE INSTITUTE

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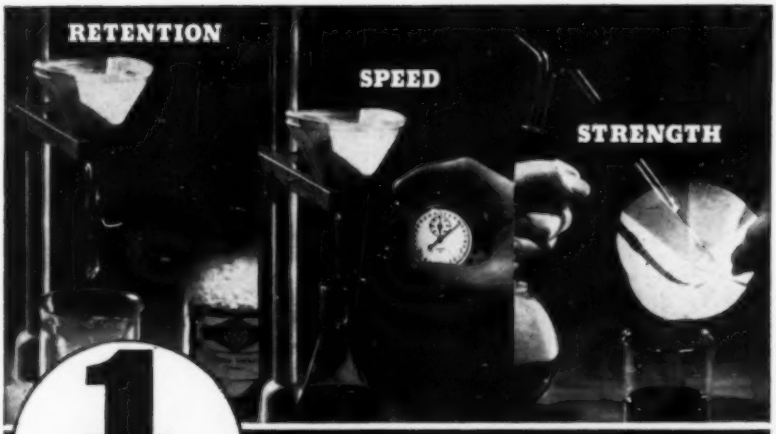

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The CHEMIST

Publication of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

V. F. KIMBALL, *Editor*, 233 Broadway, New York City

VOLUME XIII NOVEMBER, 1936 NUMBER 8

TABLE OF CONTENTS

	Page
Schedule of Meetings	724
A Message from the President — *Maximilian Toch, F.A.I.C.*	725
Otto Paul Amend — *J. W. H. Randall, F.A.I.C.*	726
Chemist Wanted	726
Opportunities for Service by the Institute — *William J. Cotton, F.A.I.C.*	727
Kurt Walter Franke, F.A.I.C.	737
Books	738
Council	740
Chapters	743
Our New Members	746
News	749
Additional Page for Roster	753
Chemists Abroad — *J. N. Taylor, F.A.I.C.*	754
The Walrus and the Carpenter	756

THE AMERICAN INSTITUTE OF CHEMISTS
HOWARD S. NEIMAN, *Secretary*
233 Broadway
New York, N. Y.

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Meetings 1936-1937 New York, N. Y.

October 10th, 1936

AMERICAN CHEMICAL SOCIETY. Outing at Westport, Conn.

October 23rd

THE AMERICAN INSTITUTE OF CHEMISTS. Dr. W. M. Malisoff, *"Philosophy of Science."*

November 6th

SOCIETY OF CHEMICAL INDUSTRY in charge. Joint meeting with American Chemical Society. Presentation of Chemical Industry Medal to Walter S. Landis.

December 11th

AMERICAN CHEMICAL SOCIETY in charge. Joint meeting with Society of Chemical Industry.

December 18th

THE AMERICAN INSTITUTE OF CHEMISTS. Speaker to be announced.

January 8th, 1937

SOCIETY OF CHEMICAL INDUSTRY in charge. Joint meeting with American Chemical Society. Perkin Medal award to Thomas Midgley, Jr.

February 5th

AMERICAN CHEMICAL SOCIETY in charge. Joint meeting with Society of Chemical Industry.

February 19th

SOCIETY OF CHEMICAL INDUSTRY. Dr. Wallace P. Cohoe, speaker.

February 26th

THE AMERICAN INSTITUTE OF CHEMISTS. Speaker to be announced.

March 5th

AMERICAN CHEMICAL SOCIETY in charge. Joint meeting with Society of Chemical Industry. William H. Nichols Medal award to Frank C. Whitmore.

April 9th

SOCIETY OF CHEMICAL INDUSTRY in charge. Joint meeting with American Chemical Society. Program to be announced.

April 23rd

THE AMERICAN INSTITUTE OF CHEMISTS. Speaker to be announced.

May 7th

THE AMERICAN CHEMICAL SOCIETY. Annual Meeting.

May 21st

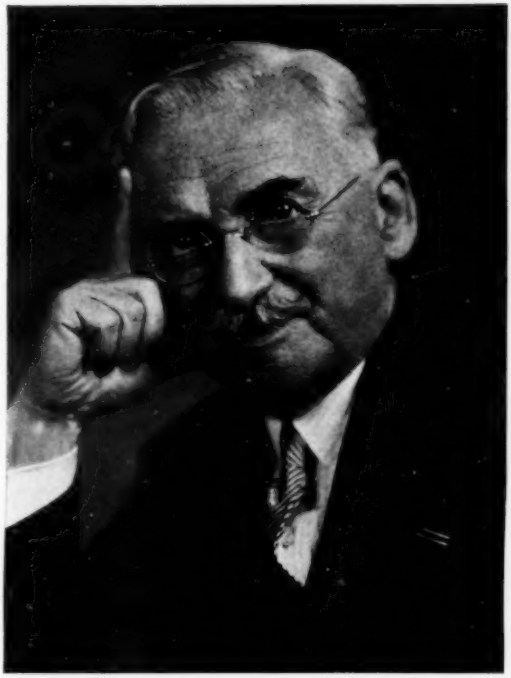
THE AMERICAN INSTITUTE OF CHEMISTS. New York Chapter's annual business meeting.

June 11th

AMERICAN CHEMICAL SOCIETY. Program to be announced.

These meetings will be held at The Chemists' Club, 52 East 41st Street, New York, N. Y., unless otherwise announced.

EDITORIAL



When this is published, the presidential election will have been decided. It makes absolutely no difference which one of the two major candidates has been elected. The United States will proceed in an orderly and constructive way toward success. We have had six years of want and, if nothing unforeseen happens, we shall have many years of better times—not the crazy prosperity of the twenties, but the sane progress of an orderly civilization. More chemists will be needed and, while it is not within the province of any one man to foretell the future, I believe and I feel that we are all on a moderate way to success.

Maximilian Toch

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Otto Paul Amend, F.A.I.C.

In the death of Otto Paul Amend, F.A.I.C., THE INSTITUTE lost a friend, a valued member and supporter. His kindly disposition and genial manner drew to him a host of friends, and to them the passing of "O. P." is a distinct personal loss.

From the early days of The Chemists' Club, "O. P." was constantly "on the job" as an unofficial welcoming and entertainment committee. He loved his fellow man and was ever ready and willing to help the less fortunate, both with advice and with the material things of life—many times at great sacrifice.

The son of Bernard G. Amend, one of New York's leading pharmacists, "O. P.", after studying at the old Columbia School of Mines under the beloved Chandler and later at Wuerzburg, returned to New York to enter the employ of the firm of Eimer and Amend. He served this firm in various capacities and as a director until in 1925. On the resignation of August Eimer, "O. P." became president, which office he held until the end. His ability as an organic chemist was remarkable, while few pharmaceutical chemists were his equal, and many important industrial chemical problems were solved by him. His knowledge of chemical literature was almost uncanny.

During the years of service with his firm, he, by his congeniality and good fellowship built up a wealth of friends both for himself and for Eimer and Amend. He was loved and respected by the host of chemists throughout the country.

"O. P.'s" cheery greeting and ever-ready cigar became almost a national institution to those of us who were fortunate enough to be counted as his friends.

The writer embraces this opportunity of expressing his sorrow at the loss of his old friend, "O. P."

—J. W. H. Randall, F.A.I.C.

Chemist Wanted

1-11-36. A manufacturer of gloves wants an expert in tanning and other processes used in the manufacture of leather suitable for making gloves. Position outside of the United States. Please apply to THE CHEMIST.

Opportunities for Service by the Institute

by **William J. Cotton, F.A.I.C.**

An Inspiring Talk Given at the 1936 Annual Meeting of the Institute Held in Buffalo, New York

THERE are those present who could discuss this subject more skillfully and adequately than can I. The papers already presented have contained much food for thought as regards the services that can be rendered by the INSTITUTE. But because of my concern for what seems to me to be the outstanding need of the chemist and the chemical profession, and because I believe that the INSTITUTE is the one logical agency that can, if it will, meet this need, I wish to make my contribution.

Recently I was one of a dinner group of technical men representing several chemical plants. We were addressed by a chemical plant executive of many years' experience in the chemical industry and one who during the Spanish-American war was a Commander in the United States Navy. The subject of the proper planning and execution of projects was under discussion. He said, "If you find yourself at sea in a fog, stop, take soundings, plot your position, plot the position of your objective. Then, and then only, proceed." So my remarks today should be considered as taking soundings in an effort to contribute my bit toward plotting the future course of the INSTITUTE, so far as a single individual can do it.

The INSTITUTE in the short period of thirteen years since its inception, has covered much ground. It has successfully hurdled most of the many difficulties that all new organizations must face. Mistakes have undoubtedly been made but these today are all water under the bridge. Many men have toiled and labored faithfully in bringing the INSTITUTE to its present level of prestige and service. An association of over a thousand of the better part of the chemical talent in this country cannot but attest to this fact.

We, today, however, are mostly concerned with looking into the future. As we look forward, what are the services that should be rendered by the INSTITUTE? How much will they cost? How are they to be financed? Which of them are properly for the local

chapters to consider and which can best be done by the National Council?

My thoughts along these lines are premised upon three considerations, namely:

(1) That nothing should be done by the INSTITUTE that is satisfactorily being done by any other organization.

(2) That nothing should be done by the National Council that can equally well be done by the local chapters.

(3) That nothing should be done that will injure the chemical industry, for this industry and the professional chemist are destined to sink or swim together.

If we scan the published list of objectives and achievements of the INSTITUTE, it will be seen that it can be resolved into two groups: the concrete or tangible, such as the reclassification of the chemists of the Brooklyn Navy Yard; and the intangible, such as the promotion of a code of ethics. In general, I believe it may be said, that the tangible and specific objectives are merely the general and intangible objectives broken down into bits; that the reduction to practice of any broad objective is by the route of a group of related minor objectives, each of which is very concrete and specific. The broader objectives do not touch the daily life of the professional chemist except as he contacts with the more minute and concrete activities of the INSTITUTE. It will, therefore, be apparent why, in the discussion that follows, the stress is laid on the more tangible possible activities.

To illustrate the value of the concrete, I cite an experience of some years ago. At the time I was on the membership committee of the Western New York Section of the American Chemical Society. It is not to my credit that, within a very short period, I was able to obtain thirty-two new memberships. The credit must be given to the American Chemical Society. Because of the excellent publications of the Society, I had something tangible to offer the prospect. How many of those thirty-two members do you suppose that I would have been able to sign up had I not had the journals to offer? At that time the membership fee was fifteen dollars, all journals included. If the membership fee had been reduced to five or to even three dollars and I had not had the journals to offer, I am certain that not more than two or three prospects would have been interested, this in spite of the fact that the American Chemical Society offers several intangible benefits.

Another experience may be in order right here. During January of this year, I approached one of the chemical leaders of the St. Louis area for the purpose of inducing him to become a member of the INSTITUTE. Like leadership everywhere, he is one who would quickly join effort and share expense in a worthwhile program of achievement. He asked these questions: What is your present program? How are you financing it? What would be the program of a St. Louis Chapter? This friend of mine was already a member of the leading technical societies such as the American Chemical Society (dues $20) and the American Institute of Chemical Engineers (dues $25.00). To present to him a program backed by dues of only $5.00 would be fatal. He knows that worthwhile objectives cost both money and effort to achieve. To present a program made up largely of rather broad and intangible objectives, even though they are good as such, would be doubly fatal. So I answered him thus: "The dues were $10.00 until recently when they were reduced to $5.00. I do not know why the Council did that unless it was realized that the bulk of the work to be done by the INSTITUTE must be done by the local chapters. That by reducing the dues, the way was opened for the chapters more readily to increase the local dues." I went on to tell him that in the event of a St. Louis Chapter, there would probably be the national due of $5.00, plus a small local due, plus special assessments for specific works, each separately authorized by the chapter, and that the total might approximate $25.00 per year. On some such basis as this most active men can be interested, whereas on a basis primarily of just low dues with general and intangible objectives, only the professional joiners offer a fertile field for canvass.

I do not propose this afternoon even to suggest a finished program for any chapter or for the Council. That would be presumptuous on my part even if it were possible to do. I will be satisfied if my remarks stir up discussion and provoke thought on the part of those present.

Because the national dues have been reduced to the uniquely low figure of $5.00, it is apparent that after meeting the expenses of the Secretary's office and THE CHEMIST, there cannot be much left with which to do other work. I shall not waste much time, therefore, in discussing specific opportunities for the Council.

Parenthetically, let me say that, to my way of thinking, there are opportunities that would justify an increase of dues, which subject, however, is of sufficient scope for a discussion all its own. Today I shall list as illustrative a group of activities for the consideration of local chapters primarily. The suggestions further are built for the most part around one central broad objective designed to meet what seems to me to be the greatest single need of the average chemist.

DURING the more than twenty-five years of my chemical experience, I have known, better than by merely casual contact, almost three thousand chemists, representative of all types of chemical activity. As a student and teacher, I have been connected with four colleges or universities. I have become acquainted with chemists in various technical and scientific societies. Work in two branches of the Government Service brought contact with a host of technical men. At one time or another, I have been a member of the technical staff of five industrial organizations. These personal remarks are only for the purpose of giving weight and backing to a picture of the average professional chemist as I see him. This individual we must visualize, if we are to gauge his needs.

By training the chemist is a professional man. But training alone does not make a man professional. It is merely the first qualification toward becoming professional. This first qualification is met alike by doctor, lawyer, chemist, and to a slightly lesser degree by the dentist. The further requirements for recognition as a professional man are met by the doctor, lawyer, dentist, and by a few, but very few, chemists. The advanced qualifications to which I refer involve an attitude of mind, a developed self-reliance, a broad outlook on life, a certain business acumen, a knowledge of human nature, and a sound and practical evaluation of social values. These things the other professions learn, probably painfully, from their clients. The chemists, on the other hand, with but few exceptions, are employees on a salary basis of an institution or organization. The opportunity to learn these fundamentals is not forced upon them. The INSTITUTE can render no one greater service to the chemist than to supply to him through one or several channels those impulses that will make of him an all-round professional man. To do so will contribute to his happiness, will

increase his value to his employer, and will prompt him to recognize and meet his civic responsibilities. Incidentally, the INSTITUTE would benefit tremendously.

Much as I regret it, I do not possess an Aladdin's lamp that can be applied to the situation. Nor do I have a wealth of A-1 ideas. However, I am going to suggest a brief series of very simple and achieveable activities that do aim toward the general objective. The list is merely illustrative. My greater purpose is to arouse in you a recognition of the objective and an interest that will result in the application of mental effort to the problem before us. My suggestions follow:

I. Type of Meetings

Meetings should not be at too frequent intervals. Everyone is more than busy these days. Further, the bulk of the work to be done must be done by assignment to committees. Except on rare occasions, programs should be of a symposium type utilizing several of the membership, each to discuss for a limited short time a specific phase of the subject under discussion. Outside speakers should be avoided, except as they contribute some special point of view to the symposium under development. The subjects for discussion are preferably non-technical; rather they should be of professional or civic interest. Dinner immediately preceding a discussion is probably of advantage. On special occasions, such as the presentation of a medal or other honor, the entire affair can well assume a formal atmosphere.

II. Index the Local Chemical Literature, Particularly the Journals

Probably the most important tool of the practicing chemist is the chemical literature. Most communities have a surprisingly complete collection of chemical journals, the difficulty being that no one knows which library carries a specific reference. In areas such as the Niagara and St. Louis, an index giving the local libraries carrying any particular journal saves much time. A number of years ago some twenty college, city, reference, and industrial libraries of the Buffalo-Niagara area coöperated in such an enterprise to the mutual advantage of all. Such an index must be checked frequently.

III. Advisory Service to Local Libraries

Following as a natural sequence to the preceding suggestion is that of servicing the various local libraries, especially the public and reference libraries, relative to the selection of chemical journals and books

for purchase. The objective here is the elimination of duplication where practicable. The total community funds available will thus result in a wider range of the more pertinent chemical literature. Over a period of years this becomes significant. About twenty years ago such a committee functioned in the Buffalo-Niagara area, the benefits of which are apparent even today. More recently a committee of the Niagara Chapter of the AMERICAN INSTITUTE OF CHEMISTS resumed this work. The libraries welcome the assistance that such a professional committee can offer. The chemists and the chemical industry both benefit. Those on the committee doing the work benefit most through self-development and the friendships accruing through new contacts.

IV. Maintain a Close Contact with State Legislative Representatives

With the rapid increase in the relative importance of the chemical industry, bills presented to legislatures on which the professional chemist is eminently qualified to speak, will swell in volume. Signs of this have already appeared in some of the eastern states. The lay members of the legislatures are likely to be bewildered by proposals of a largely technical nature. They will welcome the contact and coöperation of the chemist. Now is the time to establish such contacts, i. e., before the horse is out of the barn. An example of this occurred in New York State, before whose legislature three bills, all pernicious so far as I am concerned, were presented, the purpose of which was to license chemists as are doctors, lawyers, dentists, and engineers. There is no doubt but that eventually license laws for chemists will be enacted in all states. As a preliminary step to the study of the situation, the Niagara Chapter held a symposium covering the subject to which the local legislative representatives were invited. A rather frank discussion followed to which contributions were made by representatives of both the American Bar Association and the American Medical Association.

A strong active legislative committee should exist in every chapter to study, suggest, and follow developments, not only of the license trend, but of all matters of interest to the chemist that comes before the state legislatures. The success of this activity is largely dependent upon maintaining friendly contacts with all the local legislative representatives.

V. Maintain an Active Committee on Chemists' Contracts

The existence of such a committee in most of the chapters is an established fact, but the extent and value of their activity is questionable.

I once had the privilege of looking over a collection of about a dozen of chemists' expired contracts. They differed so radically that all

could not be right and just. So far as that small collection went, the contracts offered by the large industrial units were for the most part equitable, liberal, and fair. Certain of the others, however, were curiously apprehensive lest the chemist gobble up the goose that laid the golden egg, and guarded against this contingency by curious clauses and restrictions.

The matter of equitable contracts between the chemical industry and the professional chemist is vital, as neither can prosper for long unless the other does. The function of a contract committee is as much to bring the chemist to realize the rights of the industry as it is to point out where he should draw the line in standing for his own rights.

Specifically such a committee should:

(1) Collect and study a large number of existing contracts.

(2) Retain competent legal advice to assist in drawing a half-dozen type contracts applicable in the particular state of residence.

(3) Be available for consultation by all chemists in the area served.

VI. Promote a Dignified but Vigorous Publicity Campaign

The objectives of such publicity are:

(1) To inform the lay public regarding the contributions of the chemical industry to social progress—more particularly the contributions of the various local units.

(2) To call the attention of the local public to particularly meritorious work of local chemists, when such is warranted. Usually local acclaim by one's associates is more satisfying than acclaim at a distance.

(3) To evaluate for the newspapers on a sane basis the vivid and rather distorted press dispatches covering new scientific achievements.

The first of these may be realized by the preparation of a series of articles, each of which covers the history and growth of a unit of the local industry, for publication in the Sunday paper. In Buffalo, the newspapers were found to be quite receptive to this plan, providing such articles were well-written and accompanied by pictures. The chief obstacle was the inertia of the technical men when it came time to prepare these articles.

The second objective may be achieved in a number of ways.

(a) The patents of local inventors, including those of the chemists, may be listed for brief press notice. One of the Buffalo papers for several years has issued such a write-up every second week.

(b) To prepare for the local press a brief write-up of particular achievements of local technical men. Such items can almost always be so worded that confidential information is not disclosed.

The third objective is not now so essential as was the case a few years ago. The various news gathering agencies have taken great pains to moderate and verify dispatches on technical subjects. Nevertheless, it behooves the Publicity Committee to get acquainted with those in charge of the local agencies of such organizations as the United Press and the Associated Press.

VII. Recognition of Outstanding Local Ability

It is only natural that the individual chemist who has done particularly meritorious work should be honored by his associates. No other stimulus is the equal of this in promoting further achievement. This can best be done by the award of honor. It is not at all essential that a cash reward be involved.

The occasions of such an award should be formal and open to the public. The recipient's family is entitled to share in the pleasure of the event. Reporters should be given a rather frank and complete statement of the circumstances surrounding the award, together with a photograph of the man. No one loses by such an award. The industry, the profession, and the man all gain. It is a truly happy event for all.

VIII. Back up the Chemical Departments of Local Universities

The students in chemistry of today are the practicing chemists of tomorrow. Even as the qualifications of good chemists are becoming increasingly severe, so must the training of chemists be scrutinized more and more closely.

Today the chemistry department of a university of limited funds is apt to be penalized for the benefit of the departments of law and medicine. This condition is due in large measure to the stiff requirements for recognition by the American Bar Association or the American Medical Association. The university officials quite naturally yield where the pressure is greatest in the allotment of funds. The exertion of similar pressure in favor of the chemistry departments through recognition is really the job of the chemical industry, probably through such channels as the AMERICAN INSTITUTE OF CHEMISTS and the American Chemical Society. Although the job is of a major national importance, yet the local chapters frequently have opportunity to back up the chemistry departments of their local institutions.

IX. Insist upon a High Standard of Ethics by the Chapter Membership

The INSTITUTE has an excellent code of ethics, the recognition of which by individual members will go a long way toward inducing a professional attitude of mind. How can a Chapter enforce the code? It is well known that to summarily drop a man for reasons of professional ethics lays the Chapter, the INSTITUTE, and all individual officials thereof open to suit for libel by the accused. Not until there is a legal basis for recognition as by a license law, can such a step be taken, and then only by due process of trial before the licensing body sitting as a court.

In the meantime, however, the local chapter can enforce the code largely by the pressure of counsel and advice on the fellow-member that tends to err. At times drastic remedies are available, if required. To illustrate: It was at one time learned that an associate who should have known better, indulged in the smuggling of narcotics into the country. Failure to take warning and desist resulted in prompt coöperation with the Federal Narcotic Authorities. Again, the publication of false data on which to base spurious patents may be exposed and thus render the patent invalid. Another instance is the case of an associate who repeatedly claimed that he had a Ph.D. from a prominent university, partly on which basis he was given employment. It was eventually learned that he had never gone further than high-school. Being capable, he had picked up an excellent knowledge of chemistry that at first misled. Publicity of the facts was rather severe on him, as before long he had to leave the community. These instances are related to show that the enforcement of a code of ethics from day to day is largely up to the local chapters, and that ways and means exist in most instances for meeting the situations that might arise. Other illustrations could be given were it necessary to do so.

X. A New Technique for the Employment Committee

While unemployment among chemists has existed during the depression of the past few years, yet with the current pick-up in business conditions, providing it persists, the employment committees are likely to have relatively little to do of the sort of thing that is expected of them. There is, however, an opportunity and a curious situation for them to meet.

Industrial units deem it a matter of courtesy not to offer employment to a chemist as long as he is still in the employment of another, even though the chemist might thereby get into work for which he is better qualified to produce larger earnings. Undoubtedly they are cor-

rect in this feeling in spite of the fact that at times both the chemist and the two units involved may all be the losers. There should be some way of meeting this situation without injury to any party concerned. The employment committees can well study this problem. Its solution is necessary if there is to be an unrestricted opportunity for professional progress and advancement of those already employed.

XI. Promote a Better Understanding of Patent Matters by Chemists

Time will not permit of elaboration on how to do this except to say that occasional forums conducted by capable chemist patent attorneys have resulted in several interesting and profitable evenings.

XII. Contact the Chemist in Outlying Districts

The headquarters of most chapters will probably always be located in the larger cities throughout the country, and a large portion of the membership will lie within the metropolitan area.

There are many capable men living at a greater distance who should be members of the INSTITUTE, but who are not because they "feel out of it." They feel as though they were going among strangers when they do have the opportunity to go. Their location will not permit them to be active members. These outlying professional men need, even more than does the city chemist, the professional backing of the INSTITUTE. Frequently they will be the only representatives of the profession in their community, serving perhaps as superintendent and chemist of a glue factory or cement mill.

It is suggested that for each, say, ten such outlying members there be appointed one active member whose duty is it, following each meeting, to drop each of the ten a postal or better a note, telling what transpired at the meeting and any news that may have developed. At such times as the distant member can get into a meeting this active member will be his sponsor introducing him around and making him feel at home in general. I personally would covet the legitimate excuse thus offered to an active member to make the acquaintance of ten professional men in various nearby communities. Such contacts are apt to prove interesting to anybody who enjoys people, and also of possible value.

XIII. Provide Club Room Facilities

This suggestion may seem trite to city chapters already equipped with such facilities. The less populous areas, I believe, need such accommodations even more. Club room facilities, centrally located, and in some instances in coöperation with other technical organizations, would have

the following advantages:

(1) Outlying members could use such facilities as their headquarters when in the city.

(2) Members of the INSTITUTE from other chapters, passing through, would have the club facilities at their disposal. There they would contact the local group without effort or loss of time.

(3) The chapter would have a permanent home and place of meeting.

From conversations that I have had, it is my impression that this activity would probably have a greater appeal to the average chemist than some of other really more important activities.

The list could be extended but I must close. If the Council had any money to spend, a whole new list could be formulated for them from which they could pick and choose. Enough has been said, however, to indicate that a wide range of concrete, interesting, and profitable activities await the application of money and effort. The workers are the ones to be envied for through their close association in a common achievement a free masonry and comradery of spirit develops that is among the greatest joys of life.

Kurt Walter Franke, F. A. I. C.

It is with deep regret that the AMERICAN INSTITUTE OF CHEMISTS records the death of one of its prominent chemists, Dr. Kurt Walter Franke.

Dr. Franke was born in St. Paul, Minnesota, in 1889. He received the B.S. and M.S. degrees from the University of Virginia, and the Ph.D. degree from the University of Minnesota. After receiving his doctor's degree, he was appointed head of the department of agricultural chemistry at South Dakota Agricultural Experiment Station at Brookings, S. C. Here his brilliant work on the "alkali disease" affecting the livestock of that area brought the coöperation of the United States Department of Agriculture. The alkali salts were found not to be responsible for the disease, but an organic selenium compound probably found in grains grown in that region was indicated as the cause of the trouble. Unfortunately at the time of Dr. Franke's death in September, 1936, this work was still uncompleted.

Dr. Franke was a charter member of THE AMERICAN INSTITUTE OF CHEMISTS.

BOOKS

VOLUMETRIC ANALYSIS. By Francis Sutton. 12th Edition. Revised by A. D. Mitchell. *P. Blakiston's Son and Company.*

When a book, over a period of seventy years, has gone through twelve editions, there is very little probability that attention needs to be called to it. Its merit has been thoroughly established, and its field of usefulness is well-known. The reviewer's function can only consist in noting such changes as have taken place in the latest revision.

We, therefore, mention that the present edition contains a new section on Potentiometric Titration; that the section on Gas Analysis has been revised completely and considerably enlarged; that the section on Water Analysis also has been thoroughly worked over and contains a considerable discussion on the interpretation of results. Naturally, these latter are based on British standards and experience, but the data generally will be useful in this country.

As a whole, the reviewer believes that Sutton is an indispensable part of the library of any analyst.—Karl H. Herstein, F.A.I.C.

ORGANIC CHEMISTRY. By James B. Conant. *MacMillan Company.*
REACTIONS OF ORGANIC COMPOUNDS. By W. J. Hickinbottom. *Longmans, Green and Company.*

The difference between these books is more striking than the content of either.

Dr. Conant's text-book has evidently met with success, since the edition at hand is a revision of the first edition. When an organic chemist and teacher of Dr. Conant's distinction is willing to set down in writing what he considers the necessary material for an introductory course in organic chemistry, one can only assume that his experience in his own work, as well as his experience as a teacher have guided him in the selection of material. For this reason, the book will doubtless be of interest to teachers of organic chemistry, that they may compare Dr. Conant's ideas of importance with their own.

Dr. Hickinbottom's volume is based on an entirely different theory of teaching organic chemistry, entirely aside from the fact that it is quite obviously addressed to a more mature group of students. It is distinguished, however, by an almost entire absence of comprehensive theory. Instead, the reactions of organic compounds are exemplified by a very great number of preparative directions. The synthesis of

ideas is evidently left to the instructor using this text-book.

It happens that the reviewer's personal predilection is toward a book of the type of Hickinbottom's. The reviewer does not believe that theoretical organic chemistry is, even to this day, advanced to the point where general theory will supply the worker with information as to the behavior of specific compounds, except in the simpler cases. Hickinbottom's book, therefore, not only serves as a text-book, but will be found a valuable reference and source of experimental procedure for the worker in this field.—Karl M. Herstein, F.A.I.C.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, etc. REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, and MARCH 3, 1933

Of THE CHEMIST, published monthly except June, July, and August at New York, N. Y., for October 1, 1936.

STATE OF NEW YORK } ss.
COUNTY OF NEW YORK }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Vera F. Kimball, who, having been duly sworn according to law, deposes and says that she is the Editor of THE CHEMIST and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of	Post Office Address
Publisher: THE AMERICAN INSTITUTE OF CHEMISTS,	233 Broadway, New York, N. Y.
Editor: Vera F. Kimball,	
Managing Editor: Vera F. Kimball,	233 Broadway, New York, N. Y.
Business Managers: THE AMERICAN INSTITUTE OF CHEMISTS,	233 Broadway, New York, N. Y.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member must be given).

AMERICAN INSTITUTE OF CHEMISTS, 233 Broadway, New York, N. Y.
(Non-profit making corporation. No stockholders.)

Maximilian Toch, President, 386 Fourth Avenue, New York, N. Y.

Robert J. Moore, Vice-president, 230 Grove Street, Bloomfield, N. J.

B. H. Knight, Treasurer, 50 East 41st Street, New York, N. Y.

H. S. Neiman, Secretary, 233 Broadway, New York, N. Y.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) NONE.

4. That the two paragraphs, next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is——. (This information is required from daily publications only.)

Vera F. Kimball

(Signature of Editor)

Sworn to and subscribed before me this seventh day of October, 1936.

Marie A. Kurtzke, Notary Public
(My commission expires March 30, 1938)

COUNCIL

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Vice-President, ROBERT J. MOORE
Secretary, HOWARD S. NEIMAN
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CHAPTER REPRESENTATIVES

New York	*Niagara*	*Philadelphia*	*Washington*
LLOYD VAN DOREN	ARTHUR W. BURWELL	C. W. RIVISE	LOUIS N. MARKWOOD

September Meeting

THE one-hundred and thirty-fourth meeting of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS was held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on September 24, 1936, at six o'clock P.M.

President Maximilian Toch presided. The following officers and councilors were present: Messrs: R. A. Baker, F. G. Breyer, H. T. Clarke, M. L. Crossley, B. H. Knight, R. J. Moore, H. S. Neiman, W. T. Read, A. Rogers, N. A. Shepard, M. Toch, L. Van Doren, and F. W. Zons. Miss V. F. Kimball was also present.

The minutes of the previous meeting were approved. The Treasurer's report, showing a cash balance of $351.75, was accepted and ordered filed.

The following committees were appointed:

COMMITTEE ON MEMBERSHIP

W. T. Read, *Chairman*
N. A. Shepard
H. A. Gardner, to represent Washington Chapter.
Gustav Egloff, to represent Chicago district.
W. J. Cotton, to represent Middle West exclusive of Chicago.
Representative Pennsylvania Chapter—to be appointed.
Representative Niagara Chapter — to be appointed.
Representative West Coast district —to be appointed.

COMMITTEE ON UNEMPLOYMENT

Frank G. Breyer, *Chairman*
Other members to be appointed.

COMMITTEE ON HONORARY MEMBERSHIP

W. T. Read, *Chairman*
R. A. Baker

BUDGET COMMITTEE

Arthur Linz, *Chairman*
Arthur D. Robson
Frederick W. Zons

Upon motion made and seconded, the personnel of the above committees was approved with the proviso that additional members may be added to these committees from time to time as may be needed.

The following Committees were elected:

PROFESSIONAL EDUCATION

M. L. Crossley, *Chairman*
D. D. Jackson
H. T. Clarke

ETHICS

R. J. Moore, *Chairman*
Additional members to be chosen later.

QUALIFICATIONS

H. S. Neiman, *Chairman*
W. L. Prager
J. W. H. Randall
F. W. Zons

PUBLICITY

Leon V. Quigley, *Chairman*
Additional members to be chosen later.

The Committee appointed to make recommendations for the formation of Student Chapters of the INSTITUTE reported that it is premature for the INSTITUTE to establish such chapters at the present time. Upon motion made and seconded, action on the report was deferred until the October meeting of the INSTITUTE.

The Secretary presented a letter from Dr. J. N. Taylor, F.A.I.C., referring to an article entitled, "Federal Research Subsidy." The Secretary was requested to reply that the INSTITUTE would encourage the increase of research appropriations.

The Secretary read a letter from the Association of Municipal Chemists of the City of New York, and upon motion made and seconded, Frederick Kenney was appointed to act on a committee, composed of himself as chairman, and one other member to be appointed later, to make recommendations.

The Secretary read a letter from the Washington Chapter regarding suggested action to be taken on the matter of chemists' economic welfare. Upon motion made and seconded, the following committee was appointed to obtain further information on the subject: Lloyd Van Doren, Chairman, James H. Hibben, and M. R. Bhagwat.

The Secretary read a letter from Dr. Moses Gomberg thanking the INSTITUTE for his election to Honorary membership.

The President read a letter written by Robert J. Moore, which explained the professional objectives of the INSTITUTE; and it was requested that this letter be printed in THE CHEMIST, and that reprints be obtained for use by the Committee on Membership.

The matter of blanket-coverage insurance for INSTITUTE members was brought up and upon motion made and seconded, it was agreed that it is inadvisable at the present time.

The Secretary announced that during the summer eighty-five new members were received into the INSTITUTE.

Upon motion made and seconded, the following additional new members were elected:

FELLOWS

PAUL ALLEN, JR., *Assistant Professor*, St. John's College, Annapolis, Md.

H. F. BARNARD, *Director of Research*, Farm Chemurgic Council, Dearborn, Mich.

R. C. BENNER, *Director of Research*, The Carborundum Company, Niagara Falls, N. Y.

CHARLES A. COOK, *Biological Chemist,* Experimental Research Laboratories, Burroughs Wellcome and Co., Tuckahoe, N. Y.

ROBERT P. COURTNEY, *Development Engineer,* Bakelite Corporation, Bloomfield, N. J.

CLYDE A. CROWLEY, *Consulting Chemist,* Technical Service Bureau, Inc., 6805 N. Clark Street, Chicago, Ill.

ISAAC DROGIN, *Research Chemist,* J. M. Huber, Inc., 460 W. 34th Street, New York, N. Y.

WILLIAM C. EICHELBERGER, 433 Brattle Road, Syracuse, N. Y.

EDWARD ELLERY, *Professor of Chemistry,* Union College, Schenectady, N. Y.

M. R. EVERETT, *Professor of Biochemistry,* University of Oklahoma, Oklahoma City, Okla.

B. B. FREUD, 5858 Magnolia Avenue, Chicago, Ill.

HENRY C. FULLER, *Analytical and Consulting Chemist,* 1835 Eye Street, N.W., Washington, D. C.

HENRY A. GARDNER, *Director of Scientific Section Laboratories,* National Paint, Varnish and Lacquer Association, 2201 New York Ave., N.W., Washington, D. C.

D. R. HALE, *Research Chemist,* Radiotron Division, R. C. A. Mfg. Co., Inc., Harrison, N. J.

G. F. HENRY, *Professor of Chemistry,* College of Puget Sound, Tacoma, Wash.

HENRY HOWARD, *Consulting Engineer,* Paradise Road, Newport, R. I.

ROBERT N. ISBELL, *Associate Professor of Chemistry,* Wake Forest College, Wake Forest, N. C.

ARTHUR LINZ, *Chemical Engineer,* Climax Molybdenum Company, 500 Fifth Avenue, New York, N. Y.

IRVIN R. MACELWEE, *Works Chemist,* Congoleum-Nairn Inc., Marcus Hook, Penna.

PAUL C. WETTERAU, *Assistant Works Chemist,* Congoleum-Nairn Company, Marcus Hook, Penna.

JUNIORS

HARRY L. ANDREWS, JR., *Research Chemist,* Congoleum - Nairn, Inc., Marcus Hook, Penna.

PETER A. DECARLO, *Teacher Chemistry and Biology,* P. S. 39, 235 East 125th Street, New York, N. Y.

JAMES S. HENDERSON, *Analytical Chemist,* Royal Baking Powder Company, 62 Ninth Street, Brooklyn, N. Y.

STUDENT

DAN PAUL MANKA, *Student,* Valparaiso University, Valparaiso, Ind.

The following changes in rank were granted to INSTITUTE members:

Carl L. Engelhardt, raised from Student to Junior member.

John A. Rieger, raised from Student to Junior.

William Rose, raised from Student to Junior.

Michael Russo, raised from Junior to Associate.

Carl K. Stoddard, raised from Junior to Associate.

Lonnie C. Elmore, raised from Associate to Fellow.

George Jerzykowicz, raised from Associate to Fellow.

Francis G. Metro, raised from Associate to Fellow.

Isabelle B. Romans, raised from Associate to Fellow.

President Toch reported on his activities to obtain a commemorative stamp for chemists. Following a visit with the Secretary of the Treasury, Mr. Morgenthau, Dr. Toch presented the matter to President Roosevelt.

President Toch also reported a discussion with Governor Lehman of New York with reference to a bill for the licensing of chemists.

The Secretary was directed to send a letter to George Hasslacher's widow and mother expressing the INSTITUTE's sorrow over the loss of a fine friend to the chemist.

The National Council of THE AMERICAN INSTITUTE OF CHEMISTS is scheduled to meet on the following dates: November 19, 1936, and December 17, 1936.

There being no further business, adjournment was taken.

CHAPTERS

New York

Chairman, Raymond E. Kirk *Vice-chairman,* D. D. Berolzheimer
Secretary-treasurer, James W. H. Randall
52 East 41st Street
New York, N. Y.
Council Representative, Lloyd Van Doren

The New York Chapter met at The Chemists' Club, New York, N. Y., on October 23, 1936, with Dr. R. E. Kirk presiding. An enthusiastic audience of record attendance was present to hear Dr. William Marias Malisoff, Editor of *Philosophy of Science,* discuss the Philosophy of Research. Desiring to stimulate, rather than instruct, Dr. Malisoff's brilliant presentation of his subject brought out a spirited discussion. The dream which the Philosopher visions is that of "a real scientific age, in which every citizen is in some sense a research worker . . . who is guided by an ever-growing materialist ethics of a nobility far beyond that of any idealistic dream, which will find its growth as a reflection of the processes of nature-in-history." A résumé of this talk will appear in a later issue of THE CHEMIST.

Niagara

Chairman, Groves H. Cartledge *Vice-chairman,* Howard W. Post
Secretary-treasurer, William R. Sheridan
1439 Kenmore Avenue
Kenmore, New York
News Reporter to THE CHEMIST, Albert L. Hall
Council Representative, Arthur W. Burwell

A meeting of the Niagara Chapter of the INSTITUTE was held on October 2, 1936, at the Buffalo Consistory, with twenty members present. Dr. Groves H. Cartledge presided.

The Committee on Education reported that it was coöperating with the technical high schools by arranging to assist in vocational guidance work.

The Committee on Publicity reported that several members were available as speakers for talks on subjects of general interest for meetings such as Rotary Club, Ad Club, Garden Clubs, Church and Fraternal groups, etc.

Charles F. Smith, Jr., spoke on "What THE AMERICAN INSTITUTE OF CHEMISTS Offers that is Unique", and showed that

the chemist has a dual role — that of scientist and that of citizen with community interests. As a scientist, the chemist needs a forum. He needs a technical publication. He needs an organization to promote research. As a citizen with special interests, he needs an organization to which he can bring his practical problems. He needs an organization to advance his general professional interests, such as patents, contracts, legal status as scientist. He needs an organization to prevent imposture on the public or unethical work. He needs an organization to act as classification medium for the different types of chemists. He needs a voice, as does the general chemical industry. He needs a supply of trained workers. The general public, as well, needs a professional organization of chemists which it can consult.

The American Chemical Society supplies the chemists' scientific needs, and THE AMERICAN INSTITUTE OF CHEMISTS supplies the chemists' practical and professional needs.

Dr. M. C. Taylor discussed the Code of Ethics of the INSTITUTE, pointing out that a chemist's work is different from that of many other executives in that he must report the scientific truth. His obligations to his profession require him to oppose unethical advertising of worthless products. Should he obtain employment with a competitive firm, it is essential that his preceding employer's business be protected at all costs. Article 18, Section a, of the Code of Ethics reads, "If a chemist uses information obtainable only from his client or employer which is not common knowledge or public property, any results in the form of designs, plans, inventions, processes, etc., shall be regarded as the property of the employer." Dr. Taylor brought out the fact that if, for example, a draftsman discovers a chemical invention, that invention becomes his own property, according to law, and not the property of the employer. He concluded his talk with the challenging question, "Do chemists as a class desire solidarity to such extent as to undertake the effort involved?"

Discussion of both papers was led by Dr. J. A. Handy, on the general theme that an "INSTITUTE" chemist must be an upstanding, honest, fearless Gentleman, and all that that implies.

Pennsylvania

Chairman, Joseph W. E. Harrisson *Vice-chairman,* Lewis D. Newitt
Secretary-treasurer, Avenir Proskouriakoff
67 Fairview Avenue
Lansdowne, Penna.
Council Representative, Charles W. Rivise

ANNUAL REPORT (1935-1936)

The program of the season was opened on October 26, 1935, by a visit to the National Farm School near Doylestown, Penna.

The first meeting of the year was held on December 12, 1935, and was devoted entirely to a discussion of the type of program to be given at Chapter meetings. This has always been one of the most difficult problems of the Chapter, and the members are very much divided in their opinions. Some of the members are in favor of programs having little or nothing to do with chemistry, and being devoted preferably to economic subjects of vital importance to chemists as a professional group. Other members are becoming increasingly insistent that the programs be entirely

chemical in their nature. Still others have expressed themselves as being in favor of subjects on the borderline, that is to say, subjects which are not generally discussed at meetings of the American Chemical Society. The programs for the rest of the year have been more or less an attempt at a compromise between the apparently hopelessly divergent views.

At the January meeting (January 7, 1936), Dr. Kalteyer of the Jefferson Medical School gave an illustrated talk entitled "Studies in Abdominal Pain".

The February meeting took the form of a symposium at the Research Institute of the Lankenau Hospital. The following were the subjects:

1. Some Rôles Played by Sulphur Compounds in Growth and Development.
   Dr. S. P. Reimann.
2. Non-aqueous Oxidation of Cystine and Cysteine.
   Dr. G. Toennies.
3. A Disulphoxide of Cystine and its Reactions.
   Dr. T. Lavine.
4. Determination of RSH and RSSR.
   Dr. K. Shinohara.
5. Precipitation and Recovery of Cystine and Cysteine.
   Dr. Grace Medes.

The March meeting was devoted to a discussion of the economic status of the chemist.

Two meetings were held in April. The first of these meetings was held on April 7, 1936, at the U. S. Customs Building, Philadelphia. Dr. Brinton spoke on "Forty Years Reminiscences in Food Adulteration". An opportunity was afforded for an inspection of the new Government laboratories.

The second April meeting, which was the last of the season, took the form of an open meeting at the Franklin Institute. All persons interested in chemistry and particularly college students majoring in chemistry were invited. Dr. W. T. Read, F.A.I.C., of Rutgers University spoke on "The Chemical Professions" and answered many questions as to the choice of vocation by those present.

The Chapter started the 1935-1936 season with a balance in the treasury of $8.26 and ended the season with a balance of $27.66.

The following are the officers for the coming year: Chairman: Joseph W. E. Harrisson, Vice-chairman: Louis D. Newitt, Secretary-treasurer: Avenir Proskouriakoff.

Washington

Honorary President, Charles E. Munroe *President,* Louis N. Markwood
Vice-President, Norris W. Matthews *Treasurer,* James B. Martin
Secretary, Ralph B. Deemer
213 Maple Avenue, Takoma Park, Maryland.

News Reporter to THE CHEMIST, James F. Couch
Council Representative, Louis N. Markwood

The regular September meeting of the Washington Chapter was held at the Cosmos Club on September eighteenth, with President Markwood in the chair. A report of a special committee on objectives of THE AMERICAN INSTITUTE OF CHEMISTS was presented and received favorable comment. Plans for the coming year were discussed at some length.

OUR NEW MEMBERS

M. S. ANDERSON, F.A.I.C., studied at Simpson College, Iowa State College, and George Washington University, from which he obtained the Ph.D. degree. Experienced in the fields of general and physical chemistry, inorganic chemistry, geological chemistry, analytical chemistry, and soils, fertilizers and agricultural poisons, he holds the position of chemist in the Bureau of Chemistry and Soils, U. S. Department of Agriculture, Washington, D. C.

F. CLARK ATWOOD, F.A.I.C., was graduated from Massachusetts Institute of Technology. Specializing in general and physical chemistry, electrochemistry, metallurgy, general industrial chemistry, cement and building materials, paints, varnishes and resins, leather and glue, he is the inventor of several processes and materials, has written many articles, and holds patents in a number of these fields.

JOHN CLARK BAKER, F.A.I.C., received the Ph.D. degree from Columbia University. Specializing in the fields of diastatic enzymes, casein, milk control, water sterilization, applications of chlorine, flour and textile bleaching, condensor cleaning, and electrolytic cells, he is vice-president of Wallace and Tiernan Company, Newark, N. J.

C. OLIN BALL, F.A.I.C., obtained the Ph.D. degree from George Washington University. An expert on food technology, thermal sterilization of canned food, temperature distribution in retorts, and technological phases of canning, he is assistant to the director of research of American Can Company, Maywood, Ill.

DWIGHT C. BARDWELL, F.A.I.C., received the Ph.D. degree from the University of California. He specializes in apparatus and plant equipment, general and physical chemistry, acids, alkalies, salts and sundries, and is the author or co-author of miscellaneous publications in these fields. He is employed as research chemist in the Nitrogen Division by The Solvay Process Company, Syracuse, N. Y.

A. L. BARKER, F.A.I.C., studied at the University of Alabama, the University of Chicago, and the University of Wisconsin from which he obtained the Ph.D. degree. Specializing in organic chemistry, particularly the deaminization of esters of amino acids, he is professor of chemistry at Ripon College, Ripon, Wis.

KENNETH B. BARNES, F.A.I.C., obtained the M.S. degree from the University of Chicago, and is now a candidate for the Ph.D. degree. He is particularly interested in inorganic chemistry and the teaching of chemistry, and is head of the department of chemistry of Heidelberg College, Tiffin, Ohio.

EMIL J. BAUMANN, F.A.I.C., was graduated from Yale University with

the Ph.D. degree. Specializing in biochemistry and physiology of thyroid, and suprarenal glands, and biochemical methods, he is the author of various papers on these subjects. He is chemist at Montefiore Hospital, New York, N. Y.

HOWARD H. BEARD, F.A.I.C., holds degrees from the University of South Carolina, Columbia University, and Yale University. Interested in analytical chemistry, biological chemistry, foods, fats, fatty oils, and the teaching of chemistry, he has published about fifty papers in the field of nutrition and metabolism. He is professor of biochemistry at Louisiana State University, New Orleans, La.

ORVILLE A. BEATH, F.A.I.C., has studied at the University of Wisconsin and the University of Kansas. Specializing in mineralogical and geological chemistry, organic chemistry, soils, fertilizers and agricultural poisons, he is the author of several bulletins and articles on soils and poisonous plants. He is research chemist at the University of Wyoming, Laramie, Wyoming.

JOHN S. BEEKLEY, F.A.I.C., received degrees from Miami University, the University of Illinois, and Princeton University. Particularly interested in the fields of adsorption of ions and catalysis, he is manager of the Process Section of the Ammonia Department, E. I. du Pont de Nemours and Company, Charleston, West Virginia.

HOWARD B. BISHOP, F.A.I.C., was graduated from the University of Michigan. He is interested in acids, alkalies and salts, and specialties for laundry and dry cleaning, holds several patents, and is the author of a number of articles. He is president and treasurer of Sterling Products Company, Easton, Penna.

GILBERT H. BOGGS, F.A.I.C., has studied at the University of Georgia, and received the Ph.D. degree from the University of Pennsylvania. He is director of the Department of Chemistry and Chemical Engineering of the Georgia School of Technology, Atlanta, Georgia.

ROBERT D. BONNEY, F.A.I.C., received the S.B. degree in chemical engineering from Massachusetts Institute of Technology and continued graduate study while instructing there for two years. He specializes in linoleum, drying oils, paint, paper, felt, and components and derivatives thereof, and is patentee or co-patentee of a number of inventions in those fields. His present position is assistant manager of manufacturing at Congoleum-Nairn, Inc., Kearny, New Jersey.

BRIAN S. BROWN, F.A.I.C., is a graduate of Georgia School of Technology. Interested in resins and the manufacture of rosin oil, he has been with the Georgia Rosin Products Company since 1918, first as general manager and now as president. A major in the Chemical Warfare Reserve, he was recently transferred to the Inactive Reserve.

CHARLES F. BURGESS, F.A.I.C., received the Sc.D. degree from the University of Wisconsin. Particularly interested in electrochemistry, metallurgy and metallography, and general industrial chemistry, he has organized and directed several companies, among which is the Burgess Battery Company, Chicago, Illinois, of which he is president.

DORAH L. BURNELL, F.A.I.C., holds two degrees from the University of Nebraska, and is associate professor and head of the Department of Chemistry at Houghton College, Houghton, N. Y.

ARTHUR W. CAMPBELL, F.A.I.C., was graduated from the University of Oregon, and also holds the Ph.D. degree from the State University of Iowa. He specializes in organic chemistry of accelerators and antioxidants; the uses of carbon black and the chemistry of carbon black, especially that of the thermal decomposition blocks. He is the author of several papers and holds several patents in this field. His position is research chemist with the Thermatomic Carbon Company, care of Commercial Solvents Corporation, Terre Haute, Ind.

RALPH H. CARR, F.A.I.C., received the B.S. degree from Wooster College, and the Ph.D. from the University of Wisconsin.

Particularly interested in soils, fertilizers, and agricultural poisons, foods, cellulose, wood products, fats, and sugar, he is the author of forty-five papers. He is professor of agricultural chemistry at Purdue University, West Lafayette, Indiana.

JOSEPH S. CHAMBERLAIN, F.A.I.C., is a graduate of Iowa State College, received the Ph.D. from Johns Hopkins University, and has studied at the University of Berlin and at Oxford. He specializes in organic and agricultural chemistry; parasulfamin benzoic acid; proteins of wheat and flour. He is professor of organic chemistry at Massachusetts State College, Amherst, Mass.

ERNEST D. CLARK, F.A.I.C., received the A.B. degree cum laude in chemistry from Harvard, and the Ph.D. degree from Columbia. He is the author of fifty publications on proteins of fish, plant oxidases, poisonous fungi, chemical changes in fish in cold storage, composition and food value of various fish, iodine in salmon, fish decomposition products, place of fish in the diet, life history of salmon, distribution and foreign trade in canned foods, etc. His position is director of the Northwest Branch of the National Canners Association, Seattle, Washington.

LEROY V. CLARK, F.A.I.C., has studied at Grove City College, West Virginia University, McGill University, and holds the Ph.D. degree from the University of Pittsburgh. He specializes in dynamites; detonators; primers; nitrocellulose; explosive devices; synthesis of primary explosives; organic micro-analysis; rayon manufacture, and corrosion problems. He is author or co-author of a number of publications. He is employed by American Cyanamid and Chemical Corporation at Latrobe, Pennsylvania, as explosives research chemist.

HARRY L. COLE, F.A.I.C., has the M.S. degree from Kansas State Col-

lege, and has also studied at the State College of Washington, the University of California, and Colorado State College. He specializes in physiological chemistry and is the author of several laboratory manuals on inorganic and organic chemistry. He is now assistant professor of chemistry at the State College of Washington, Pullman, Wash.

GERALD H. COLEMAN, F.A.I.C., received the A.B. degree from Ohio State University and the Ph.D. degree from the University of Illinois. He specializes in the bactericidal activity of synthetic organic compounds against the leprosy bacilli. He is employed by the Dow Chemical Company, Midland, Michigan, as organic research chemist.

WALTER A. COOK, F.A.I.C., received the Ph.D. degree from the University of Cincinnati. Preferring the fields of organic and analytical chemistry, he is the author of several publications. He is professor and head of the Department of Chemistry, University of Akron, Akron, Ohio.

NEWS

President Roosevelt recently invited Dr. Maximilian Toch to Hyde Park to discuss the advisability of revising the patent system and patent courts of the United States.

Dr. Toch was tremendously impressed by the great knowledge the President possessed on this subject and found the President very favorably inclined toward a rational revision of the patent situation.

The subject as briefly outlined by Dr. Toch was as follows: (1) There should be a patent court. (2) Judges should have technical or scientific advisors on the bench. (3) It is advisable to allow the public use of patents that have not been in operation for two years. (4) Patent examiners leave the Patent Office to start in practice or take more reasonable compensation so that they will not be enticed away.

Dr. Toch is internationally known as a chemist. He is a member of the American Bar Association and is a patent attorney. As President of Toch Brothers, he is also a manufacturer of paints and varnishes.

C. C. Concannon, F.A.I.C., is the author of "World Chemical Developments in 1935", Trade Information Bulletin No. 832, of the U. S. Department of Commerce, Washington, D. C. Reviewing world chemical industry, this bulletin discusses new developments, new processes, plant expansion, cartels, export bounties and other government assistance, foreign trade, etc., and is available at fifteen cents a copy from the Superintendent of Documents, Washington, D. C.

At the recent Pittsburgh meeting of the American Chemical Society, the Washington Chapter was represented by papers from seven of its members, F. O. Lundstrom, A. L. Mehring, D. L. Reed, W. H. Ross, C. W. Whittaker, J. H. Yoe, and J. F. Couch, who were on the programs of the various divisional meetings.

Mr. L. R. Heiss, J.A.I.C., who received the 1935 Student Medal of the A.I.C. awarded at American University, has recently joined the sales staff of the American Instrument Company of Silver Spring, Maryland, and will represent that company in the Washington, D. C. district.

D. F. J. Lynch, F.A.I.C., formerly of Washington, has assumed his new duties as chief of the Agricultural By-Products Laboratory at Ames, Iowa. Best of luck in the new office, Danny!

J. F. Couch, F.A.I.C. addressed the American Pharmaceutical Association branch in Philadelphia, on October 14th, on the subject, "The Chemistry of Stock-poisoning Plants." The following evening he read a paper on the "Society of Arcueil" before the History of Science Seminar at the George Washington University.

Harry L. Fisher, F.A.I.C., noted for his scientific contributions in the rubber and chemical fields, has joined the U. S. Industrial Alcohol Company as a member of its research staff. He will be located in the new research laboratories of the company at Stamford, Conn. For the past seventeen years, Dr. Fisher has been identified with important research in the rubber industry, having served with the B. F. Goodrich Company and U. S. Rubber Company successively. He has specialized in developments pertaining to rubber, resins, organic combustions and nitrogen heterocycles. Among Dr. Fisher's accomplishments are a number of patents covering important chemical processes and products.

The Chemical Industry Medal of the Society of Chemical Industry was presented to Dr. Walter S. Landis at a joint meeting of the American Section of the Society of Chemical Industry and the American Chemical Society on November 6, 1936. The medal is awarded annually for valuable application of chemical research to industry and was given this year to Dr. Landis for his work in the chemistry and economics of the fertilizer industry. Dr Landis presented a paper entitled "Concentrated Fertilizers" and Dr. M. C. Whitaker, F.A.I.C., spoke on the subject of the Medalist. Dr. D. D. Jackson, F.A.I.C., of Columbia University made the presentation of the medal. The meeting was held at 7:45 P.M. at The Chemists' Club, 52 East 41st Street, New York, N. Y. A dinner in honor of Dr. Landis was also held there immediately preceding the meeting, starting at 6:15 P.M.

Hillman C. Harris, J.A.I.C., who received a Student Medal from the Washington Chapter in 1935, has been employed during the year on his Master's degree at the University of Maryland in coöperation with the U. S. Bureau of Fisheries.

Foster D. Snell, F.A.I.C., announces the opening of a Baltimore branch of Foster D. Snell, Inc. The new office and laboratory are located at 215 N. Calvert Street, Baltimore, Md. This branch, for the present, will be under the direction of Theodore M. Miller, who, because of residence in Baltimore, is familiar with business conditions and methods there. Every form of chemical

service is to be rendered by the Baltimore branch by close liaison with the Brooklyn laboratories. The main activities are expected to be food analysis and grading, food research, and industrial and research services to manufacturers.

Dr. Thomas Midgley, Jr., has been elected to receive the Perkin Medal of the Society of Chemical Industry for 1937. The medal is awarded annually for valuable work in applied chemistry and will be presented this year to Dr. Midgley for his work in the development of anti-knock motor fuels, safe refrigerants, etc. The selection is made by a committee representing the five chemical societies in the United States. The medal will be presented on January eighth, at a meeting to be held at The Chemists' Club, New York, N. Y.

Franklin D. Jones, F.A.I.C., was recently made vice-president of Peacock Laboratories, Inc., consultants and manufacturing chemists, located in the Bourse Building, Philadelphia, Penna.

The American Section of the Société de Chimie Industrielle met October 30, 1936; at Columbia University. Mr. Alexander H. Kridel addressed the meeting on "Conversion of Waste Flax Straw into Linen Fibre for the Textile and Paper Industries".

Professor Henry C. Sherman spoke before a meeting of the New York University Chapter of Sigma Xi at New York University College of Medicine, on October 27th. The subject of his address was "Problems and Progress in the Field of Nutrition".

Motion Picture Development

A series of films, selected by the Museum of Modern Art to illustrate certain phases in the development of the motion picture, will be exhibited once a month in the Recital Room of the Barbizon Hotel, 140 East 63rd Street, New York, N. Y., at 8:30 P.M. on the following dates:

November 12, 1936—The Western Film

The Great Train Robbery (1903)

The Last Card (*William S. Hart*) (1914)

The Covered Wagon (1923)

December 3rd—Comedies

The Doctor's Secret (1900)
Gertie the Dinosaur (1909)
His Bitter Pill (1916)
The Freshman (1925)
The Sex Life of the Polyp (1928)
The Skeleton Dance (1929)

January 14th—The Film in Germany

Primitive German films by the pioneer Sklandanowsky (1896)
Don Juan's Wedding (1909)
Misunderstood (1913)
The Cabinet of Dr. Caligari (1919)
The Golem (1920)

February 18th—Mystery and Violence

Tatters: A Tale of the Slums (1907)

Underworld (1927)

March 4th—Screen Personalities

The *May Irwin-John C. Rice* Kiss (1896)

Enoch Arden (*Lillian Gish and Wallace Reid*) (1915)

Monsieur Beaucaire (*Rudolph Valentino*) (1924)

Subscription for the series of five programs is $2.50. Tickets may not be sold at the door. A limited number of reservations may be obtained from Miss Helen Yard, 140 East 63rd Street, New York, N. Y.

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Rio de Janeiro, 31 de agosto de 193 6.

Sir.
Mrs. George (Bessie Tate).
Cordially yours.

As homage to your great technical merits and in gratitude to the services you have contributed to teaching in America, the Congregation of this Academy resolved to confere you a Diploma of Doctor in Chemistry, in Honoris-Causa.

We know that the United States is to-day the world's largest producer of chemical commodities and without boasting, the United States now can lay claim to a greater chemical industry than that possessed by any other country. I would be very happy to see you among us and I would also appreciated picture of yourself.

This Directions has confirmed this acts of high justice and has confered you the Gold Medal of Merit.

Any further reply you may care to send, it will be warmly appreciated and I want to thank you for the kind attention given to this letter.

Cordially yours.

Secretary Director.

Prof. Arsenio dos Santos Barbosa.

(*Accompanying the above letter was the following information*)

Just a few lines to let you know that the cost of graduation with a Diploma, credential and the Gold Medal of Merit is $10.00 (ten dollars) minimum.

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No bill payable on order: SEND AMERICAN BANK NOTES, BY RETURN OR POST.

Secretary Director.

Additional Page for Roster

Allen, Paul, Jr.
(1936), *Assistant Professor,* St. John's College, Annapolis, Maryland.

Andrews, Harry L., Jr.
(J. 1936), *Works Chemist, Congoleum* Nairn, Inc., Marcus Hook, Penna.

Barnard, H. E.
(1936), *Director of Research,* Farm Chemurgic Council, Dearborn, Mich.

Benner, R. C.
(1936), *Director of Research,* The Carborundum Company, Niagara Falls, N. Y.

Cook, Charles A.
(1936), *Biological Chemist,* Burroughs Wellcome and Company, Tuckahoe, N. Y.

Courtney, Robert Paul
(1936), *Development Engineer,* Bakelite Corporation, 230 Grove Street, Bloomfield, N. J.

Crowley, Clyde A.
(1936), *Consulting Chemist,* 6805 North Clark Street, Chicago, Ill.

DeCarlo, Peter A.
(J. 1936), *Teacher of Chemistry and Biology,* Public School Number 39, New York, N. Y.

Drogin, Isaac
(1936), *Research Chemist,* J. M. Huber, Inc., 460 West 34th Street, New York, N. Y.

Eichelberger, William Custer
(1936), 433 Brattle Road, Syracuse, N. Y.

Everett, M. R.
(1936), *Professor of Biochemistry,* University of Oklahoma, School of Medicine, Oklahoma City, Okla.

Freud, B. B.
(1936), 5858 Magnolia Avenue, Chicago, Ill.

Fuller, Henry C.
(1936), *Analytical and Consulting Chemist,* 1835 Eye Street, N.W., Washington, D. C.

Gardner, Henry
(1936), *Director of Scientific Section Laboratories,* National Paint, Varnish and Lacquer Association, Washington, D. C.

Hale, D. R.
(1936), *Research Chemist,* R. C. A. Manufacturing Company, Radiotron Division, Harrison, N. J.

Henderson, James S.
(J. 1936), *Analytical Chemist,* Royal Baking Powder Company, Brooklyn, N. Y.

Henry, G. F.
(1936), *Professor of Chemistry,* College of Puget Sound, Tacoma, Washington.

Isbell, Robert Nevill
(1936), *Associate Professor of Chemistry,* Wake Forest College, Wake Forest, N. C.

Linz, Arthur
(1936), *Chemical Engineer,* Climax Molybdenum Company, New York, N. Y.

MacElwee, Irvin R.
(1936), *Works Chemist,* Congoleum Nairn, Inc., Marcus Hook, Penna.

Manka, Dan P.
(S. 1936), *Student,* Valparaiso University, Valparaiso, Ind.

Wetterau, Paul C.
(1936), *Assistant Works Chemist,* Congoleum Nairn Company, Marcus Hook, Penna.

Every member get a member.

CHEMISTS ABROAD

By James N. Taylor, F.A.I.C.

FRENCH CHEMICAL interests have concluded an agreement with representatives of labor organizations, according to a report from *Assistant American Trade Commissioner Earle C. Taylor* (*Paris*). This collective labor contract, it is pointed out, is of primary importance to the French chemical industry as it includes eight large chemical and fertilizer plants in the Department of the Nord. The contract stipulates the methods of election of workers' representatives, conditions of work, paid vacations and minimum wage rates.

PROFESSIONAL opportunities in Shanghai are few. In the case of lawyers, largely as a result of the abolition of "mixed courts" in the International Settlement, legal practice has considerably declined during recent years. . . .With physicians and surgeons, the necessity of establishing social contacts is of equal importance. For dentists the situation would appear, generally speaking, rather more promising. . . . Competition from low-priced Chinese, Japanese, and Russian dentists is increasing.—*American Consul Richard P. Butrick* (*Shanghai*).

IN CONNECTION wih the general wage increases being applied throughout Italian industry, the Federation of Rubber, Plastics and Electric Conductor Manufacturers has accepted a wage increase of ten per cent on the minimum and on the actual wages in plants under the Federation with the exception of certain of the plastics industries, states a report from *American Trade Commissioner Elizabeth Humes*, (*Rome*). Salaried employees earning over Lire 1,300 a month receive an increase of ten per cent, those earning over Lire 1,300 a month, eight per cent. In the pyroxylin plastics, galalith, synthetic resins, and horn industries, the wage increases are eight per cent, the increases to salaried employees being eight and six per cent, respectively, as above. All these increases were effective from September first and affected 30,000 workers.

GERMAN Chemical industry wage rates continue frozen at depression levels, though relatively slight increases have occurred in total weekly earnings in some branches which have increased the number of working hours, according to reports from *American Consul Sidney B. Redecker, Frankfort-on-Main.* Although the cost of living in Germany has risen steadily in recent years, wage increases have been generally refused by the "Labor Trustees" on the grounds that such action would tend to further increase production costs and handicap German manufacturers in export markets.

An official survey conducted in March of this year reveals that the average wage in the German chemical industry had not changed materially since the beginning of the year. According to the survey, the pay of male chemical workers averaged 38 cents per hour and that of females, 20½ cents. As the average length of the working week remained the same, there was little or no change in the average weekly earning.

Wages paid in different branches of the chemical industry varied considerably, the report shows. Weekly wages for male workers in the soap industry were highest, averaging $21.25 for skilled and $16.63 for unskilled laborers and lowest in essential oils and aromatic chemicals, where $16.19 was paid to skilled workers and $13.28 for unskilled. Female workers received the highest average in the cosmetic industry where weekly pay was around $9.53 and lowest in paint and pigments where the average was $8.37, the report states. These sums, however, were not actually paid to the workers as an average of 12.4 per cent is withheld by employers as legally-required deductions to cover wage-taxes, poll-taxes, and social insurance dues.

MR. F. E. LATHE, director of the Division of Research Information of the National Research Council (Canada), has been elected President of the Canadian Institute of Chemistry. Dr. R. T. Elworthy and Dr. Paul Gagnon have been chosen Secretary and Treasurer, respectively.

THE CHEMICAL engineer is much more concerned with the application of physics than with that of chemistry, states H. W. Cremer and A. J. V. Underwood in a paper presented at the recent Chemical Engineering Congress, as reported in *The Oil and Colour Trades Journal, London.* In discussing the education and training of the chemical engineer, the authors state that however efficient his academic training may be, his practical training is generally quite haphazard, depending very largely on the job which the young graduate manages to secure on leaving college. Opportunities of increasing his experience by a change of employment are much more limited than they were in the times before industry became concentrated into large groups as it is today, though there is a compensating factor where large firms provide a definite system of practical training. The practical training should not be postponed until after graduation, which would normally take place at the age of twenty-one or twenty-two.

Calling attention to the trade provision of educational facilities in Great Britain even though pioneer work was done at the Manchester Technical School in 1887, it was left, Cremer and Underwood comment, to the United States to inaugurate the systematic study of unit operations and to that country is due the credit for establishing the teaching of the subject on an extensive scale, including the organization of research to elucidate the basic principles underlying chemical engineering and their applications to plant design.

DR. ARTHUR LABRIE, A.C.I.C., formerly at the Atlantic Fisheries Experimental Station, Halifax, has been appointed Director of the Gaspé Fisheries Experimental Station, Grand Riviere, Quebec.—*Canadian Chemistry and Metallurgy (Toronto).*

THE ROYAL ACADEMY has appointed Dr. H. J. Plenderleith, of the British Museum Research Laboratory, to be Professor of Chemistry in succession to Dr. A. P. Laurie, whose term of office has expired.

"The time has come," the Walrus said,
"To talk of many things:
Of shoes—and ships—and sealing wax—
Of cabbages—and kings—"
The Walrus and the Carpenter

Contributions from Dentatus Research Institution, Clam Inlet, Long Island

(Anomalium—A New Element Not Included in Mendeleff's Table)

By THEODORE DENTATUS

Having realized the dream of all chemists and bought a farm, I have of course been carefully investigating it for new elements. While a thorough analysis of all parts of my landed domain has not been completed as yet to my full satisfaction, since I find that every acre presents some 43,560 square feet of area and many of the acres are upon edge and some under water, nevertheless, I have had some interesting results.

At one point (latitude ?, longitude ? Greenwich) a landslide uncovered a vein of deposit of a greenish mineral having the appearance of serpentine. This mineral in view of its many inconsistent properties I propose to call anomalite. I have performed some thousands of different analytical determinations upon this material in the last few days. The work was done in my kitchen, and naturally, in view of the importance of the subject, I used all precautions for exact work indicated by Prof. Richards, of Harvard, in connection with his atomic weight determinations.

Anomalite is for the most part a silicate of the lowest oxid of a new element which I propose to call anomalium in view of its general conflicting properties, giving it the symbol An. Mineralogically, anomalite is a unisilicate of the general formula 2 RO, SiO^2, R standing for (An, Co, Mg, Fe); and it mostly contains about 48.61595 per cent Anomalium Oxid, AnO (as nearly as I can determine in view of the incompletely ascertained atomic weight of An). Morphologically it is like olivine, and it may be regarded as olivine containing AnO replacing part or all of the MgO.

Anomalium may be readily reduced from its oxid, AnO, or directly from the silicate by any of the ordinary reducing means, such as potassium cyanid. It is, however, somewhat difficult to obtain as a button since it boils below its melting point; but with care this may be accomplished. Anomalium is a white metal looking like lead, smelling like arsenic, on bending emitting a sound like tin, tasting like iron and having the feel of graphite. These and many other curious properties, have led me to adopt the name anomalium. Among these curious properties may be noted the fact that the lowest oxid presents all the reactions of the lead salts, forming a sulfate insoluble in all acids while the highest oxid of AnO_3 forms an insoluble salt with lead oxid which is exactly like lead sulfate and can hardly be distinguished therefrom. On union of the highest oxid, or AnO_2 with the lowest oxid, AnO, the compound formed, or the intermediate oxid,

AnO_4 is naturally exactly like lead sulfate.

The lowest oxid AnO is quite basic, forming a hydrate having an alkaline reaction upon all vegetable colors affected by it. It forms salts with most of the acids and these salts, where soluble, ionize readily, giving readily mobile ions which crawl around in the solution looking exactly like crystals of potassium permanganate, except for the color. The highest oxid AnO_3 when dissolved in water behaves in a general way like sulfuric acid and also ionizes readily. When the negative ions of AnO_3 meet the positive ions of AnO in solution there is a conflict of opinion which is interesting to witness but which generally results in a deadlock and a precipitate of AnO_2 (AnO. AnO_3).

I have determined the atomic weight of An a number of times and in each case with an accuracy to the 5th decimal; but as the results do not harmonize with each other in any way, I am reluctantly compelled to believe it is an isotope of each element in the periodic table, but is an interesting speculation whether it be not the central element around which the Crookesian spiral entwines itself; the fundamental note for Newland's octaves.

Unfortunately after securing the above interesting results another landslide came along and obliterated the source of supply; probably forever.—K. P. McElroy in *Journal of Ingenuous or Almost Chemistry.*

Tribute to Tobacco

By Robert G. Ingersoll

(*1890*)

Nearly four centuries ago Columbus the adventurous, in the blessed island of Cuba, saw happy people with rolled leaves between their lips. Above their heads were little clouds of smoke. Their faces were serene, and in their eyes was the autumnal heaven of content. These people were kind, innocent, gentle and loving.

The climate of Cuba is the friendship of the earth and air, and of this climate these sacred leaves were born—leaves that breed in the mind of him who uses them the cloudless, happy days in which they grew.

These leaves make friends and celebrate with gentle rites the vow of peace. They have given consolation to the world. They are the companions of the lonely, the friends of the imprisoned, of the exile, of workers in mines, of fellers of forests, of sailors on the desolate seas. They are the givers of strength and calm to the vexed and wearied minds of those who build with thought and brain the temples of the soul.

They tell of hope and rest. They smooth the wrinkled brows of care, drive fear and strange misshapen dreads from out of the mind, and fill the heart with rest and peace. Within their magic warp and woof some potent, gracious spell imprisoned lies, that, when released by fire, softly steals the fortress of the brain and binds in sleep the captured sentinels of care and grief. These leaves are the friends of the fireside, and their smoke, like incense, rises from myriads of happy homes. . . .

Our smoking members are respectfully referred to U. S. Patent 2,051,030.

—The Walrus.

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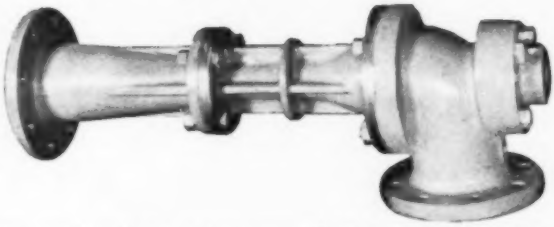

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